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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/505,645

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Sandor L. Barna

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7590

06/03/2004

Thomas J D'Amico
Dickstein Shapiro Morin & Oshinsky LLP
2101 L Street NW
Washington, DC 20037-1526

EXAMINER

TILLERY, RASHAWN N

ART UNIT

PAPER NUMBER

2612

13

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/505,645

Applicant(s)

BARNA ET AL.

Examiner

Rashawn N Tillery

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 is/are allowed.
- 6) ☒ Claim(s) 9-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed March 18, 2004 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable Guidash (US6307195).

Guidash teaches in figure 4 that during integration the potential of photodetector VPD decreases until it has filled up with photoelectrons. The signal level of the photodetector is sampled and held (SHS). Next the photodetector is reset (RG) in order to provide a reference level differential of the signal from the photodetector. In the present embodiment, the readout of the output signal level is determined by the difference between the signal level and the reset level. Thus, if the incident light level is low, the reset level will not change much from RLO. If however the incident light level is bright, the reset level could change to RLA. And in the instant the incident light is very

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bright, the reset level could change to RLB. In the present embodiment, the adjusted saturation voltage, Svsat, is set to a minimum signal level equal to RLB. See col. 9, line 65 to col. 10, line 30.

Regarding claim 9, Guidash discloses, in figures 4 and 9A, a method for flagging an oversaturated pixel in an active pixel sensor array, the method comprising:

- reading a signal voltage from a pixel;

- determining the difference between the signal level and the reset level wherein the adjusted saturation voltage is set to a minimum signal level; and

- storing a saturation flag in response to the adjusted saturation voltage exceeding the signal voltage (see examiner's notes above).

Guidash does not expressly disclose comparing the signal voltage to an adjusted saturation voltage. Nor does Guidash expressly disclose storing a saturation flag.

However, Guidash teaches, in a separate embodiment, that it is well known in the art to utilize a comparator to determine if there is a predetermined difference between a signal level and a reset level or between two reset levels. Guidash further teaches a flag is used later to determine what the final output signal is. See col. 11, lines 54-63. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Guidash's teachings from his separate embodiment as a matter of design choice since Guidash teaches that the embodiments are obvious variants.

Regarding claim 10, see claim 9 above.

Allowable Subject Matter

1. Claims 1-⁸~~4~~ are allowed.

Regarding claim 1, the prior art does not teach or fairly suggest an active pixel sensor comprising at least one pixel, a first sample and hold element, a second sample and hold element, a third sample and hold element, an adjusted saturated voltage source, and a comparator, wherein

the first sample and hold element stores a readout signal; the second sample and hold signal stores a reset signal; and the third sample and hold element stores a comparison signal.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rashawn N Tillery whose telephone number is 703-305-0627. The examiner can normally be reached on 9AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RNT


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600